

URS

April 27, 2001

Mr. Jerry Hintze
Assistant Superintendent of Technical Services
Intermountain Power Service Corp.
850 W. Brush Wellman Road
Delta, UT 84624-9546

Subject: URS Offer to Improve FGD System Performance

Dear Jerry,

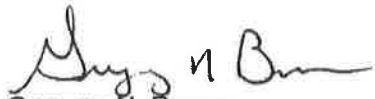
Per your request, URS is pleased to submit this revised offer for wall rings at the Intermountain Power Project FGD system. URS, formerly Radian International, LLC is the exclusive licensee of Marsulex Environmental Technologies, which holds patent rights to the wall ring technology. As exclusive licensee for retrofit application of the wall ring technology, URS has been marketing and promoting the benefits of this portion of our OverScrub™ Technology package for some time.

As you are aware, Marsulex has a patent pending on this technology and the patent information is being sent by hard copy with this letter to your attention. URS is pleased to inform IPP that through additional negotiations with Marsulex we have secured a reduction in the technology license which we will pass on to you. This further reduces our offer of early March.

As I mentioned to you on the phone, URS is very interested in working with IPP on this project this year. IPP and URS have had a good working relationship in the past as evidenced by our Memorandum of Agreement, which is in place. The basis of the original URS OverScrub™ offer comes as a result of our studies effort in characterizing the IPP absorber capabilities and defining the URS technologies that would best address the identified deficiencies. This offer although different in compensation than the original, is governed by the terms and conditions of our Memorandum of Agreement.

This URS offer represents a nearly 50% reduction in the URS annual technology fee. We hope this offer is helpful in moving this program forward quickly. We look forward to your immediate consideration. Please don't hesitate to call me at 512-419-5276 or 521-695-5787.

Sincerely,



Gregory N. Brown
Manager, Business Development
URS Corporation

2IP11-000004

URS Proposal - OverScrub™ Technology Wall Ring Application At Intermountain Power Project

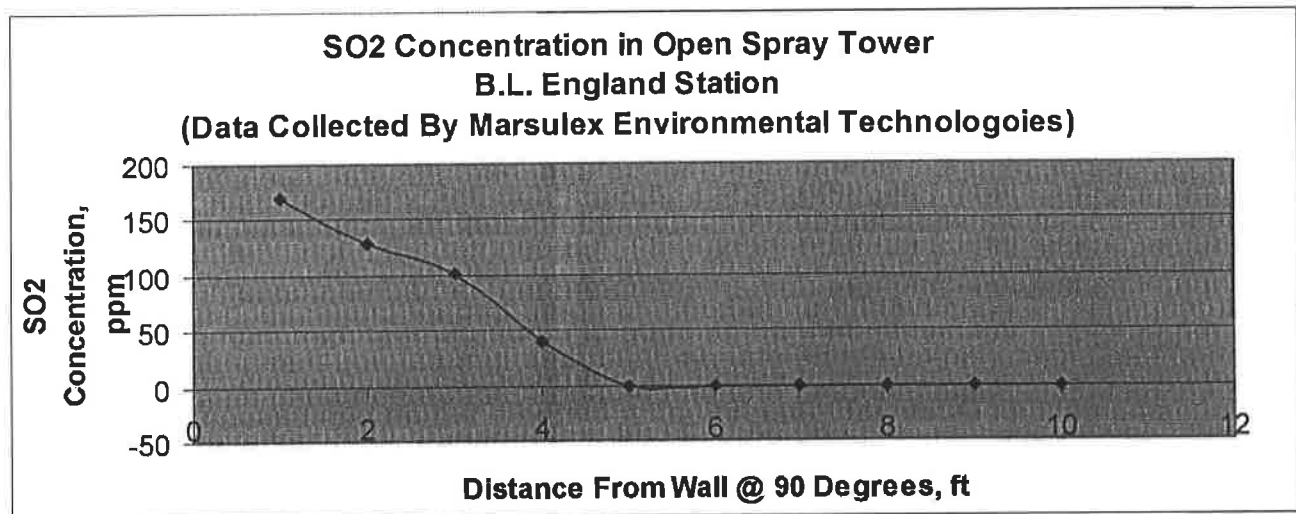
Technology Introduction

The wall ring technology was developed to improve the SO₂ removal performance of counter current spray towers where two or more spray levels are employed. By the nature of the counter current spray tower design, the density of slurry flowing counter current to the direction in the center region of the tower is typically 1.5-2.5 times the density of slurry in the annular region of the tower near the walls. This phenomena causes the gas to flow to the place of least resistance which is the annular region near the wall.

In addition, to the design limitations of spray pattern layout, the presence of the wall in the annular region eliminates the effectiveness of the slurry that impacts the walls and ultimately flows along it. It has been estimated by some, that as much as 25% of the total slurry sprayed into the tower is lost on the wall.

The results of this combined effect, is to have essentially all of the SO₂ which leaves the tower, to leave from the annular region near the wall. This is evident from field testing conducted on several circular towers as exemplified in Figure 1.

Figure 1: Atlantic Electric B.L. England Station SO₂ Concentration Vs Distance From Wall



As can be seen from this figure, 100% of the SO₂ leaving the tower comes from the annular region from zero to five feet from the wall. It should be noted that in the IPP square towers, this phenomena is significantly exaggerated. The presence of corners provides essential uncovered area for gas to flow and "sneak" from the absorber.

Because of similar results at other operating installations, a technology was developed and patented that eliminates or addresses both phenomena. The wall ring technology is the result of this research and development. By strategically placing the patented wall ring design two major changes in the scrubber gas liquid contact are accomplished. First, the large fraction of slurry which is lost to the wall is redistributed in an effective manner by stripping the slurry from the walls and shearing into the gas through a series of holes and a ledge. Secondly, as the gas now finds small amount of resistance along the wall and the presence of the wall ring forces slurry inward toward the center of the vessel.

URS Offer

URS is pleased to offer this unique patented technology to IPP improve the overall plant performance of FGD system. With the installation of the wall ring technology, URS is confident that IPP can either operate the same number of towers and pumps and improve overall SO₂ removal, or operate the same number of towers, but one fewer pump per tower and maintain the same overall SO₂ removal efficiency. The economic benefit of operation with one fewer recycle pump per tower has been estimated to be the nearly 18,000 MWhr per year.

Step One: Verification of Technology Application at IPP

URS proposes to demonstrate on a single tower the predicted performance improvements presented above. URS will supply the technology design, detail design and installation instructions for a single set of rings for one tower at the IPP station. With the results of these tests, URS will demonstrate the effectiveness of the design and confirm the potential savings to IPP.

It has been assumed per our discussions that IPP would be responsible for the installation of the rings in all vessels.

URS is willing to commit the technology, design, and verification testing for a total of **US-\$30,000.00**. Engineering for fabrication will be complete 2 weeks after IPP award. Engineering for installation will be complete two weeks prior to material delivery.

Scope of Work

URS proposes the following scope of work for this portion of the project.

Technology Supply:

URS will furnish conceptual design, sizing, location/placement and performance improvement calculations for the single tower installation.

Detailed Design:

URS will furnish a detailed design of the rings and support structure following an inspection of an IPP tower. During the fabrication effort URS will develop detailed installation instructions and drawings as necessary for installation of the rings by others.

Verification Testing:

URS will test the absorber outlet concentration from the modified tower with bottom two, top two and first and third spray levels in service and compare those result with the same test on an unmodified tower. The test time will be two requires access to the modified and a neighboring unmodified tower with IPP operations support to start and stop recycle pumps.

The SO₂ concentration on average and as a function of distance from the wall will be reported. URS will require chemistry data, CEM and fuel data to be supplied by IPP as a function of this test.

Step Two: Full Implementation at IPP

Following the successful demonstration of the technology application at IPP in step one, URS proposes to supply and implement the technology to the remaining eleven absorber modules at IPP.

URS is pleased to offer complete implementation the technology for a total of **US-\$36,000.00** per vessel modified for the total of twelve vessels. This price includes technology license fees, engineering, design, and installation verification.

Contact Information

Per your request, URS is supplying the following contacts for your review. These contacts are specifically for those domestic applications of the patented technology as applied to the installations by Marsulex.

DOMINION ENERGY (Formerly Virginia Power)
Jerry Presley
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060
(804) 273-2612

It should be noted that the installation at the Dominion Energy Mt. Storm Station Unit 1&2 is not scheduled to operate until fall 2001.